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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,564	11/28/2001	Carol T. Schembri	10981612-2	5249

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AGILENT TECHNOLOGIES, INC.
Legal Department, DL429
Intellectual Property Administration
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EXAMINER

TRAN, MY CHAU T

ART UNIT	PAPER NUMBER
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1639

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/997,564

Applicant(s)

SCHEMBRI, CAROL T.

Examiner

MY-CHAU T TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-23 and 28-35 is/are pending in the application.
- 4a) Of the above claim(s) 21-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-20 and 28-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. Applicant's amendment filed 4/27/2004 is acknowledged and entered. Claims 1-7, and 24-27 have been canceled. Claims 18, and 20 have been amended. Claims 28-35 have been added.
2. Claims 8-16 were canceled by the amendment filed on 11/28/2001.
3. Claims 18-23, and 28-35 are pending.
4. This application is a divisional of 09/354,816 filed 7/16/1999, which is now Patent 6,346,423.

Election/Restrictions

5. Claims 21-23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to *a nonelected invention*, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/8/2003.
6. Claims 18-20, and 28-35 are treated on the merit in this Office Action.

New Rejections – Necessitated by Amendment

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 18-20, and 28-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation of “*selectively protected from reaction by a protective bubble*” of claim 18 and 20 is vague and indefinite because what the protective bubble is protecting is not set forth. It is unclear what constitutes the metes and bounds of what is being protected by the protective bubble, i.e. it is the protective bubble protecting the polymers? The resistors? The surface of the substrate? Or the entire array? Thus the limitation of “*selectively protected from reaction by a protective bubble*” is vague and indefinite.

9. Claims 31-35 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: the method steps are incomplete because there is no correlation between resulting claimed product of a polymeric array and the claimed method steps. Step (b) recite the step of performing two iterations of the steps of 1) selectively protecting a site on the substrate surface with a protective bubble; 2) contacting the substrate surface with a reactive reagent that would react with the unprotected site of the surface; and 3)

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removing unreacted agent from the substrate surface. It is unclear as to the correlation between the reactive reagent and the polymer of the polymeric array.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 18-20 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Ribí et al. (US Patent 5,491,097).

The instant claims 18 and 20 briefly recites a polymeric array that is produce by a method. The claimed array is interpreted as a device comprising a substrate, a plurality of polymers that are nucleic acids, and a plurality of resistors that are beneath the surface of the substrate. The polymers are associated with both the substrate surface and the resistors. The polymers are nucleic acids. The added limitations of "selectively protected from reaction by a protective bubble" can be interpreted as the 'intermediate' of the "final" product wherein the bubble is not part of the structural feature of the final product or the process step of a product-by-process claim wherein the process limitation is the step of "protecting using a bubble".

Ribí et al. disclose a bioelectronic sensor device (array) (col. 2, lines 53-67). The bioelectronic sensor device comprising an electrically insulating solid support (substrate), a highly oriented polymerized film that is electrically semiconducting, and distal from the support is a member of a specific binding pair joined to the film (col. 3, lines 15-22; fig. 3 and 5). The

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electrodes (resistors) are formed on the non-conducting substrate followed by the coating with the electrically conducting polymer (col. 9, lines 60-67). The electrodes are beneath the surface of the substrate (col. 3, lines 19-28) (refers to claim 33). The electrodes are connected through external leads and through wires to a source of power (col. 24, lines 40-43; fig. 5, ref. #60, 62, and 64) (refers to claims 28-30). A member of a specific binding pair includes polymer such as oligonucleotides (col. 8, lines 37-44) (refers to claims 20 and 28). Therefore, the device of Ribi et al. anticipates the presently claimed product.

The new limitation "selectively protected from reaction by a protective bubble" of instant claims 18 and 20 is interpreted to be a process limitation and thus the instant claims 18 and 20 are written as product-by-process claims. "Eventhough the product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. The patentability is based on the product itself that is the array of the instant claims. Ribi et al. teach the presently claimed array. If the product in the product-by-process claims is same or as obvious from the product of the prior art, the claim is unpatentable eventhough the prior art product was made by a different process." In re Thorpe, 777 F. 2d 695, 698, 227 U. S. P. Q. 964, 966 (Fed. Cir. 1985). (See MPEP 2113).

12. Claims 18-20 and (new) 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Heller et al. (US Patent 5,605,662).

The instant claims 18 and 20 briefly recites a polymeric array that is produce by a method. The claimed array is interpreted as a device comprising a substrate, a plurality of

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polymers that are nucleic acids, and a plurality of resistors that are beneath the surface of the substrate. The polymers are associated with both the substrate surface and the resistors. The polymers are nucleic acids. The added limitations of "selectively protected from reaction by a protective bubble" can be interpreted as the 'intermediate' of the "final" product wherein the bubble is not part of the structural feature of the final product or the process step of a product-by-process claim wherein the process limitation is the step of "protecting using a bubble".

Heller et al. disclose an electronic sensor device (array) (abstract). The device comprises a plurality of micro-locations wherein each micro-location includes a surface for covalent attachment of specific binding entities, and an underlying microelectrode (resistors) (col. 5, lines 24-44; col. 9, line 18-20; col. 10, lines 5-15). The microelectrodes are connected to wires that are connected to a multiplex switch controller and DC power supply (col. 14, lines 42-60; fig. 5) (refers to claims 34-35). The specific binding entities includes polymer such as nucleic acid (col. 16, line 43-67) (refers to claim 32). Therefore, the device of Heller et al. anticipates the presently claimed product.

The new limitation "selectively protected from reaction by a protective bubble" of instant claims 18 and 20 is interpreted to be a process limitation and thus the instant claims 18 and 20 are written as product-by-process claims. "Eventhough the product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. The patentability is based on the product itself that is the array of the instant claims. Heller et al. teach the presently claimed array. If the product in the product-by-process claims is same or as obvious from the product of the prior art, the claim is unpatentable eventhough the prior art

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product was made by a different process." In re Thorpe, 777 F. 2d 695, 698, 227 U. S. P. Q. 964, 966 (Fed. Cir. 1985). (See MPEP 2113).

13. Claims 18-20 and (new) 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Hollis et al. (US Patent 5,653, 939).

The instant claims 18 and 20 briefly recites a polymeric array that is produce by a method. The claimed array is interpreted as a device comprising a substrate, a plurality of polymers that are nucleic acids, and a plurality of resistors that are beneath the surface of the substrate. The polymers are associated with both the substrate surface and the resistors. The polymers are nucleic acids. The added limitations of "selectively protected from reaction by a protective bubble" can be interpreted as the 'intermediate' of the "final" product wherein the bubble is not part of the structural feature of the final product or the process step of a product-by-process claim wherein the process limitation is the step of "protecting using a bubble".

Hollis et al. disclosed a sensor array (col. 4, lines 17-49; col. 6, lines 38-41). The array comprises a plurality of test sites (col. 5, lines 36-40) wherein each test sites comprise a substrate, resistors, and a silicon oxide film (i.e. the resistors are beneath the substrate surface) (col. 5, lines 11-15, and lines 30-32). The resistors are coupled to leads, which are connected to logic circuit (col. 5, lines 18-22; fig. 1, ref. #35, 38, and 58) (refers to claims 34-35). The test sites further comprise of oligonucleotide strands (col. 6, lines 38-45) (refers to claim 32). Therefore, the array of Hollis et al. anticipates the presently claimed product.

The new limitation "selectively protected from reaction by a protective bubble" of instant claims 18 and 20 is interpreted to be a process limitation and thus the instant claims 18

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and 20 are written as product-by-process claims. "Eventhough the product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. The patentability is based on the product itself that is the array of the instant claims. Hollis et al. teach the presently claimed array. If the product in the product-by-process claims is same or as obvious from the product of the prior art, the claim is unpatentable eventhough the prior art product was made by a different process." *In re Thorpe*, 777 F. 2d 695, 698, 227 U. S. P. Q. 964, 966 (Fed. Cir. 1985). (See MPEP 2113).

14. Claims 31-35 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ribí et al. (US Patent 5,491,097).

The instant claim 31 briefly recites a polymeric array that is produce by a method. This claim is a product-by-process claim. The claimed product is interpreted as a device comprising a substrate, a plurality of polymers that are nucleic acids, and a plurality of resistors that are beneath the surface of the substrate. The polymers are associated with both the substrate surface and the resistors. The process limitations comprises the step of a) producing a solvent layer on a substrate surface; and (b) performing two iterations of the steps of 1) selectively protecting a site on the substrate surface with a protective bubble; 2) contacting the substrate surface with a reactive reagent that would react with the unprotected site of the surface; and 3) removing unreacted agent from the substrate surface.

Ribí et al. disclose a bioelectronic sensor device (array) (col. 2, lines 53-67). The bioelectronic sensor device comprising an electrically insulating solid support (substrate), a

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highly oriented polymerized film that is electrically semiconducting, and distal from the support is a member of a specific binding pair joined to the film (col. 3, lines 15-22; fig. 3 and 5). The electrodes (resistors) are formed on the non-conducting substrate followed by the coating with the electrically conducting polymer (col. 9, lines 60-67). The electrodes are beneath the surface of the substrate (col. 3, lines 19-28) (refers to claim 33). The electrodes are connected through external leads and through wires to a source of power (col. 24, lines 40-43; fig. 5, ref. #60, 62, and 64) (refers to claims 34-35). A member of a specific binding pair includes polymer such as oligonucleotides (col. 8, lines 37-44) (refers to claim 32). Therefore, the device of Ribí et al. anticipates the presently claimed product.

Additionally, Ribí et al. disclose the method of making the product comprising the steps of producing a solvent layer on the surface and reacting the substrate surface with a reactive reagent (col. 14, lines 18-34).

Alternatively, the claimed invention further differs from the prior art teachings only by the recitation of the claim method of making the product. The claimed product of the invention appears to be the same or obvious variations of the reference teachings, absent a showing of unobvious differences. The office does not have the facilities and resources to provide the factual evidence needed in order to determine and/or compare the specific activities of the instant versus the reference product. In the absence of evidence to the contrary, the burden is upon the applicant to prove that the claimed product is different from the one taught by prior art and to establish the patentable differences. See *in re Best* 562F.2d 1252, 195 USPQ 430 (CCPA 1977) and *Ex parte Gray* 10 USPQ2d 1922 (PTO Bd. Pat. App. & Int. 1989).

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"The instant claims are written as product-by-process claims. "Eventhough the product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claims is same or as obvious from the product of the prior art, the claim is unpatentable eventhough the prior art product was made by a different process." In re Thorpe, 777 F. 2d 695, 698, 227 U. S. P. Q. 964, 966 (Fed. Cir. 1985). (See MPEP 2113).

15. Claims 31-35 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Heller et al. (US Patent 5,605,662).

The instant claim 31 briefly recites a polymeric array that is produce by a method. This claim is a product-by-process claim. The claimed product is interpreted as a device comprising a substrate, a plurality of polymers that are nucleic acids, and a plurality of resistors that are beneath the surface of the substrate. The polymers are associated with both the substrate surface and the resistors. The process limitations comprises the step of a) producing a solvent layer on a substrate surface; and (b) performing two iterations of the steps of 1) selectively protecting a site on the substrate surface with a protective bubble; 2) contacting the substrate surface with a reactive reagent that would react with the unprotected site of the surface; and 3) removing unreacted agent from the substrate surface.

Heller et al. disclose an electronic sensor device (array) (abstract). The device comprises a plurality of micro-locations wherein each micro-location includes a surface for covalent attachment of specific binding entities, and an underlying microelectrode (resistors) (col. 5, lines

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24-44; col. 9, line 18-20; col. 10, lines 5-15). The microelectrodes are connected to wires that are connected to a multiplex switch controller and DC power supply (col. 14, lines 42-60; fig. 5) (refers to claims 34-35). The specific binding entities includes polymer such as nucleic acid (col. 16, line 43-67) (refers to claim 32). Therefore, the device of Heller et al. anticipates the presently claimed product.

Additionally, Heller et al. disclose the method of making the array (col. 21, lines 4-36; fig. 14). The method comprises the step of selectively deblocking the electrodes with charged deblocking agent, and chemically coupling the first base (reactive reagent). The coupling and deblocking steps are repeated until all the different DNA sequences have been synthesized on each of the addressable micro-location surfaces (col. 21, lines 33-36). Thus producing the array.

Alternatively, the claimed invention further differs from the prior art teachings only by the recitation of the claim method of making the product. The claimed product of the invention appears to be the same or obvious variations of the reference teachings, absent a showing of unobvious differences. The office does not have the facilities and resources to provide the factual evidence needed in order to determine and/or compare the specific activities of the instant versus the reference product. In the absence of evidence to the contrary, the burden is upon the applicant to prove that the claimed product is different from the one taught by prior art and to establish the patentable differences. See *in re Best* 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *Ex parte Gray* 10 USPQ2d 1922 (PTO Bd. Pat. App. & Int. 1989).

"The instant claims are written as product-by-process claims. Eventhough the product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability is based on the product itself. The patentability of

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a product does not depend on its method of production. If the product in the product-by-process claims is same or as obvious from the product of the prior art, the claim is unpatentable even though the prior art product was made by a different process." In re Thorpe, 777 F. 2d 695, 698, 227 U. S. P. Q. 964, 966 (Fed. Cir. 1985). (See MPEP 2113).

16. Claims 31-35 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hollis et al. (US Patent 5,653, 939).

The instant claim 31 briefly recites a polymeric array that is produced by a method. This claim is a product-by-process claim. The claimed product is interpreted as a device comprising a substrate, a plurality of polymers that are nucleic acids, and a plurality of resistors that are beneath the surface of the substrate. The polymers are associated with both the substrate surface and the resistors. The process limitations comprises the step of a) producing a solvent layer on a substrate surface; and (b) performing two iterations of the steps of 1) selectively protecting a site on the substrate surface with a protective bubble; 2) contacting the substrate surface with a reactive reagent that would react with the unprotected site of the surface; and 3) removing unreacted agent from the substrate surface.

Hollis et al. disclosed a sensor array (col. 4, lines 17-49; col. 6, lines 38-41). The array comprises a plurality of test sites (col. 5, lines 36-40) wherein each test site comprises a substrate, resistors, and a silicon oxide film (i.e. the resistors are beneath the substrate surface) (col. 5, lines 11-15, and lines 30-32). The resistors are coupled to leads, which are connected to logic circuit (col. 5, lines 18-22; fig. 1, ref. #35, 38, and 58) (refers to claims 34-35). The test

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sites further comprise of oligonucleotide strands (col. 6, lines 38-45) (refers to claim 32).

Therefore, the array of Hollis et al. anticipates the presently claimed product.

Additionally, Hollis et al. disclose the method of making the array (col. 12, lines 8-49). The method comprises steps of immersing the array in de-protecting solution (refers to step (a)), irradiating only those test sites where deprotection is desired, adding the nucleic acid base (reactive reagent) for attachment to the test site, and repeating the steps of irradiation and adding the nucleic acid base to produce the oligonucleotide probes on the test sites, which would produce the array.

Alternatively, the claimed invention further differs from the prior art teachings only by the recitation of the claim method of making the product. The claimed product of the invention appears to be the same or obvious variations of the reference teachings, absent a showing of unobvious differences. The office does not have the facilities and resources to provide the factual evidence needed in order to determine and/or compare the specific activities of the instant versus the reference product. In the absence of evidence to the contrary, the burden is upon the applicant to prove that the claimed product is different from the one taught by prior art and to establish the patentable differences. See in re Best 562F.2d 1252, 195 USPQ 430 (CCPA 1977) and Ex parte Gray 10 USPQ2d 1922(PTO Bd. Pat. App. & Int. 1989).

"The instant claims are written as product-by-process claims. "Eventhough the product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claims is same or as obvious from the product of the prior art, the claim is unpatentable

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eventhough the prior art product was made by a different process." *In re Thorpe*, 777 F. 2d 695, 698, 227 U. S. P. Q. 964, 966 (Fed. Cir. 1985). (See MPEP 2113).

Double Patenting

17. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

18. Claims 31-32 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 4 of U.S. Patent No. 6,346,423 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed product of claims 31-32 is an obvious product of the claimed method of US

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Patent 6,346,423 B1). The process step of claim 31 is the same as the process steps of claim 1 in US Patent 6,346,423 B1). Therefore, the claimed product of claims 31-32 is an obvious product of the claimed method of US Patent 6,346,423 B1).

Response to Arguments

19. Applicant's argument directed to the rejection under 35 USC 102(b) as being anticipated by Ribí et al. (US Patent 5,491,097) for claims 18-20 was considered but they are not persuasive for the following reasons.

Applicant contends that the device of Ribí et al. does not anticipate the presently claimed device because "*Nowhere does Ribí et al. disclose a substrate having a surface on which a polymer is selectively protected from reaction by the presence of a protective bubble*". Thus the device of Ribí et al. does not anticipate the presently claimed device.

Applicant's arguments are not convincing since the device of Ribí et al. does anticipate the presently claimed device because the claimed device is interpreted, as the "final" product that is structurally comprises a plurality of polymers, a plurality of resistors, and a substrate. The resistors are beneath the surface of a substrate. The polymers are associated with both the surface of the substrate and the resistors. Ribí et al. teach the structural features of the claimed device as discussed in the rejection. The added limitation of "*selectively protected from reaction by a protective bubble*" is interpreted as the 'intermediate' of the "final" product wherein the bubble is not part of the structural feature of the final product. Furthermore, the added limitation can also be interpreted as a process claims and thus the instant claims 18 and 20 are written as product-by-process claims. "Eventhough the product-by-process claims are limited

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by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. The patentability is based on the **product itself** that is the array of the instant claims. Ribí et al. teach the presently claimed array. If the product in the product-by-process claims is same or as obvious from the product of the prior art, the claim is unpatentable even though the prior art product was made by a different process." In re Thorpe, 777 F. 2d 695, 698, 227 U. S. P. Q. 964, 966 (Fed. Cir. 1985). (See MPEP 2113). Thus the device of Ribí et al. anticipates the presently claimed device.

20. Applicant's argument directed to the rejection under 35 USC 102(b) as being anticipated by Heller et al. (US Patent 5,605,662) for claims 18-20 was considered but they are not persuasive for the following reasons.

Applicant argues that the device of Heller et al. does not anticipate the presently claimed device because "*Nowhere does Heller et al. disclose a substrate having a surface on which a polymer is selectively protected from reaction by the presence of a protective bubble*". Thus the device of Heller et al. does not anticipate the presently claimed device.

Applicant's arguments are not convincing since the device of Heller et al. does anticipate the presently claimed device because the claimed device is interpreted, as the "final" product that is structurally comprises a plurality of polymers, a plurality of resistors, and a substrate. The resistors are beneath the surface of a substrate. The polymers are associated with both the surface of the substrate and the resistors. Heller et al. teach the structural features of the claimed device as discussed in the rejection. The added limitation of "**selectively protected from reaction by a protective bubble**" is interpreted as the 'intermediate' of the "final" product

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wherein the bubble is not part of the structural feature of the final product. Furthermore, the added limitation can also be interpreted as a process claims and thus the instant claims 18 and 20 are written as product-by-process claims. "Eventhough the product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. The patentability is based on the product itself that is the array of the instant claims. Heller et al. teach the presently claimed array. If the product in the product-by-process claims is same or as obvious from the product of the prior art, the claim is unpatentable eventhough the prior art product was made by a different process." In re Thorpe, 777 F. 2d 695, 698, 227 U. S. P. Q. 964, 966 (Fed. Cir. 1985). (See MPEP 2113). Thus the device of Heller et al. anticipates the presently claimed device.

21. Applicant's argument directed to the rejection under 35 USC 102(b) as being anticipated by Hollis et al. (US Patent 5,653, 939) for claims 18-20 was considered but they are not persuasive for the following reasons.

Applicant alleges that the device of Heller et al. does not anticipate the presently claimed device because "*Nowhere does Hollis et al. disclose a substrate having a surface on which a polymer is selectively protected from reaction by the presence of a protective bubble*". Thus the device of Heller et al. does not anticipate the presently claimed device.

Applicant's arguments are not convincing since the device of Hollis et al. does anticipate the presently claimed device because the claimed device is interpreted, as the "final" product that is structurally comprises a plurality of polymers, a plurality of resistors, and a substrate. The

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resistors are beneath the surface of a substrate. The polymers are associated with both the surface of the substrate and the resistors. Hollis et al. teach the structural features of the claimed device as discussed in the rejection. The added limitation of “*selectively protected from reaction by a protective bubble*” is interpreted as the ‘intermediate’ of the “final” product wherein the bubble is not part of the structural feature of the final product. Furthermore, the added limitation can also be interpreted as a process claims and thus the instant claims 18 and 20 are written as product-by-process claims. “Eventhough the product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself . The patentability of a product does not depend on its method of production. The patentability is based on the product itself that is the array of the instant claims. Hollis et al. teach the presently claimed array. If the product in the product-by-process claims is same or as obvious from the product of the prior art, the claim is unpatentable eventhough the prior art product was made by a different process.” In re Thorpe, 777 F. 2d 695, 698, 227 U. S. P. Q. 964, 966 (Fed. Cir. 1985). (See MPEP 2113). Thus the device of Hollis et al. anticipates the presently claimed device.

Conclusion

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MY-CHAU T TRAN whose telephone number is 571-272-0810. The examiner can normally be reached on Mon.: 8:00-2:30; Tues.-Thurs.: 7:30-5:00; Fr.: 8:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ANDREW WANG can be reached on 571-272-0811. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mct
August 6, 2004


PADMASHRI PONNALURI
PRIMARY EXAMINER